ORDER FOR SUPPLIES OR SERVICES

PAGE 1 OF 25

1 CONTRACT/PURCH ORDER/ AGREEMENT NO	2 DELIVERY ORDER/ CALL NO	3 DATE OF ORDER/CALL (YYYYMMMDD)	4 REQ / PURCH REQUEST NO	5 PRIORITY
N65540-15-D-0005	0010	2016 Jun 06	1300566656	

6 ISSUED BY CODE N64498
NAVAL SURFACE WARFARE CENTER PHILA
(b) (6)
5001 SOUTH BROAD STREET
PHILADELPHIA PA 19112

7 ADMINISTERED BY *(if other than 6)* CODE S5111A
DCMA HAMPTON
2000 ENTERPRISE PARKWAY
HAMPTON VA 23666

8 DELIVERY FOB
[X] DESTINATION
[ ] OTHER
(See Schedule if other)

9 CONTRACTOR CODE 07MU1 FACILITY
NAME AND ADDRESS
GENERAL DYNAMICS INFORMATION TECHNOLOGY,
THOMAS J. TERNES
3211 JERMANTOWN RD
FAIRFAX VA 22030-2844

10 DELIVER TO FOB POINT BY (Date) *(YYYYMMMDD)*
SEE SCHEDULE

11 MARK IF BUSINESS IS
[ ] SMALL
[ ] SMALL DISADVANTAGED
[ ] WOMEN-OWNED

12 DISCOUNT TERMS

13 MAIL INVOICES TO THE ADDRESS IN BLOCK
See Item 15

14 SHIP TO CODE N64498
NAVAL SURFACE WARFARE CENTER PHILA
(b) (6)
NSWC PHILADELPHIA DIVISION
NSLC DETACHMENT
1601 LANGLEY AVE, (b) (6)
PHILADELPHIA PA 19112-5051

15 PAYMENT WILL BE MADE BY CODE HQ0338
DFAS COLUMBUS CENTER,SOUTH ENTITLEMENT O
P.O. BOX 182264
COLUMBUS OH 43218-2264

MARK ALL PACKAGES AND PAPERS WITH IDENTIFICATION NUMBERS IN BLOCKS 1 AND 2.

16 TYPE OF ORDER			
	DELIVERY/ CALL	X	This delivery order/call is issued on another Government agency or in accordance with and subject to terms and conditions of above numbered contract
	PURCHASE		Reference your quote dated Furnish the following on terms specified herein REF:

ACCEPTANCE THE CONTRACTOR HEREBY ACCEPTS THE OFFER REPRESENTED BY THE NUMBERED PURCHASE ORDER AS IT MAY PREVIOUSLY HAVE BEEN OR IS NOW MODIFIED, SUBJECT TO ALL OF THE TERMS AND CONDITIONS SET FORTH, AND AGREES TO PERFORM THE SAME

NAME OF CONTRACTOR | SIGNATURE | TYPED NAME AND TITLE | DATE SIGNED (YYYYMMMDD)

[ ] If this box is marked, supplier must sign Acceptance and return the following number of copies:

17 ACCOUNTING AND APPROPRIATION DATA/ LOCAL USE
See Schedule

18 ITEM NO	19 SCHEDULE OF SUPPLIES/ SERVICES	20 QUANTITY ORDERED/ ACCEPTED*	21 UNIT	22 UNIT PRICE	23 AMOUNT
	SEE SCHEDULE				

* *If quantity accepted by the Government is same as quantity ordered, indicate by X. If different, enter actual quantity accepted below quantity ordered and encircle.*

24. UNITED STATES OF AMERICA
TEL: (b) (6)
EMAIL: (b) (6)
BY: John P. Stefano (b) (6)
CONTRACTING / ORDERING OFFICER

25 TOTAL $6,803,261.40
26 DIFFERENCES

27a QUANTITY IN COLUMN 20 HAS BEEN
[ ] INSPECTED [ ] RECEIVED [ ] ACCEPTED, AND CONFORMS TO THE CONTRACT EXCEPT AS NOTED

b SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE | c DATE (YYYYMMMDD) | d PRINTED NAME AND TITLE OF AUTHORIZED GOVERNMENT REPRESENTATIVE

e MAILING ADDRESS OF AUTHORIZED GOVERNMENT REPRESENTATIVE

f TELEPHONE NUMBER | g E-MAIL ADDRESS

36. I certify this account is correct and proper for payment.
a DATE (YYYYMMMDD) | b SIGNATURE AND TITLE OF CERTIFYING OFFICER

28 SHIP NO | 29 DO VOUCHER NO | 30 INITIALS

[ ] PARTIAL [ ] FINAL

31 PAYMENT
[ ] COMPLETE [ ] PARTIAL [ ] FINAL

32 PAID BY

33 AMOUNT VERIFIED CORRECT FOR

34 CHECK NUMBER

35 BILL OF LADING NO

37 RECEIVED AT	38 RECEIVED BY	39 DATE RECEIVED (YYYYMMMDD)	40 TOTAL CONTAINERS	41 S/R ACCOUNT NO	42 S/R VOUCHER NO

Section B - Supplies or Services and Prices

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002	Engineering and Technical Services CPFF In support of the Navy Modernization Programs of Hull Material and Electronics (HM&E) systemf for Option Period 1. Technical Services are further described in the Statement of Work. FOB: Destination				(b) (4)
				ESTIMATED COST FIXED FEE	
				TOTAL EST COST + FEE	(b)

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002AA	Holding SLIN for CLIN 0002 CPFF In support of the Navy Modernization Programs of Hull Material and Electronics (HM&E) systemf for Option Period 1. Technical Services are further described in the Statement of Work. This priced SLIN is a holding SLIN for administrative purposes. This SLIN will be reduced with every additional incremental funding modification FOB: Destination		Lot		(b) (4)
				ESTIMATED COST FIXED FEE	
				TOTAL EST COST + FEE	(b) (4)

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002AB EXERCISED OPTION	Funding SLIN for CLIN 0002 CPFF FOB: Destination PURCHASE REQUEST NUMBER: 1300566656		Lot		(b) (4)
				ESTIMATED COST FIXED FEE	
				TOTAL EST COST + FEE	(b) (4)
	ACRN AA CIN: 130056665600003				

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0004					(b) (4)

Support Costs
COST
Includes material, travel, incidental subcontracting and other firect costs in support of Items 0001-0003 in accordance with the Statement of Work. The estimated costs that will be incurred over the three-year period of the contract is (b) (4) This is a Not-to-Exceed amount.
FOB: Destination

ESTIMATED COST

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0004AA			Lot		(b) (4)

Funding SLIN for CLIN 0004
COST
FOB: Destination
PURCHASE REQUEST NUMBER: 1300566656

ESTIMATED COST

ACRN AA
CIN: 130056665600004

ESTIMATED LEVEL OF EFFORT

LABOR CATEGORY	GDIT
Program Manager	(b) (4)
Sr. Engineer	
Engineer	
Pro ect Engineer	
Logistician	
QA Specialist	
Technical Writer	
Technical Illustrator	
Systems/Prog Analyst	
Computer Programmer	
CAD Designer	

(b) (4)

Clerk Typist		
Engineering Aide/Typist		
Sr. Eng Tech		
Engineering Tech		
Planner/Estimator		
Site Foreman		
Electronics Tech		
QA Technician		
Marine Equip Mechanic		
HVAC Tech		
Shipfitter/Welder/Burner		
Pipefitter/Brazier		
Marine Electrician		
Machinist		
Maint Trade Helper		
Painter/Sandblaster		
Insulator/Lagger		
Carpenter		
Laborers		
Total Prime Hours		
Total Subcontracting Hours		
Total Hours	**70,525/29,279**	

Section C - Descriptions and Specifications

STATEMENT OF WORK

CONTRACT NO. N65540-15-D-0004 through 0010
DDG MODERNIZATION BACKFIT (DDGM BF) EQUIPMENT
ELECTRICAL COPPER /FIBER/COAX CONNECTIONS and TEST SUPPORT
ON ONE (1) DDG(b) CLASS SHIP
STATEMENT OF WORK

1. BACKGROUND

1.1. The In-Service Engineering Agency (ISEA) at Naval Surface Warfare Center Philadelphia Division (NSWCPD) Code 217, in support of the US Navy's DDG Modernization Back fit Program, requires all cable removal, cable installation and connections of all electrical copper/fiber/coax cabling during the installation of Gigabit Ethernet Data Multiplex System (GEDMS) SCD 73088, Single Bridge Watchstander SCD 71726, Single CCS Watchstander SCD 71604, Digital Indicator SCD 77427, Radar & TLIs SCD 77829, Digital Fuel Control System SCD 70403 and Digital Video Surveillance System SCD 71615 aboard one (1) DDG(b) Class Ship. NSWCPD also requires testing and troubleshooting support to the ISEA for the aforementioned alterations. The seven (7) Core system technologies of SCD 73088, SCD 71726, SCD 71604, SCD 77427, SCD 77829, SCD 71615 and SCD 70403 are required to have all cables removed and installed and tested and cable to be connectorized are GEDMS, IBNS upgrades, MCS/DCS upgrades, Digital Indicator, Digital Video Surveillance System and Digital Fuel Control System upgrades respectively. NSWCPD also requires the connection of all cables into C-DR terminal boxes directly impacting the installation of SCD 73088 GEDMS. Cables required to be connected to these particular C-DR terminal boxes may or may not be one of the seven core alterations; but in either case are specifically called out using a C-DR cable connection matrix (Reference 3.43) provided by NSWCPD. In addition, NSWCPD requires all associated equipment weighing 75 pounds or less shall be mounted by the contractor.

2. SCOPE

2.1. Provide integration, engineering testing and technical support services for the cable removal, cable installation, equipment mounting, test and connectorization of all electrical copper, fiber and coax cabling for DDGM BF core alterations and C-DR terminal boxes directly impacting SCD 73088 GEDMS on one (1) DDG(b) class ship in support of Sustainment and Modernization Code 217 of the Naval Surface Warfare Center, Philadelphia Division (NSWCPD), Philadelphia, PA. The planned location for the installation services in Norfolk, VA.

2.2. The contractor shall accomplish the DDGM BF upgrade of all electrical copper, fiber and coax connectivity, which consists of copper, fiber, coax and signal power connections in accordance with Ref. 3.1, thru 3.58. Contractor shall also accomplish a complete continuity test for each DDGM BF core alteration cable from the newly installed equipment to the legacy field device. The Contractor shall accomplish the requirements of Reference 3.48. All wiring between the DIU connector and the end

device shall be completed in accordance with dates listed in the critical path equipment turnover schedule. If shrink boot back shells are being used, cables should be connectorized and pinned out but over shield and back shell must not be installed until this procedure has been completely satisfactorily. Contractor shall report all discrepancies pertaining to connections completed by other activities directly to the waterfront Ship Manager Representative (SMR) and test coordinator. Waterfront SMRs will assign correction of those discrepancies to the applicable activity. Contractor shall resolve all discrepancies pertaining to connections they were required to complete as outlined in this work package. The contractor shall support a cableway inspection prior to the start of the task. Also, all Ethernet cables shall be connected to the end user equipment and User Switch Enclosure (USE). All discrepancies shall be documented and a detailed report provided IAW reference 3.41 work item 009-73. The contractor shall remove, protect (ground straps and anti-static bags) and ship all equipment listed in the Asset Recovery List to NSWCPD as directed by the SMR.

2.3. The contractor shall manufacture all wire markers prior to start of work. Prioritization for development of wire markers shall be as follows:

2.3.1. Reference section 3.14 thru 3.34

2.3.2. NAVSEA FY 16 Standard Items (Standard Item 009-073)

2.4. The contractor shall provide programmatic and technical support during the pre-installation planning, installation, integration, test, LOA, dock trials and sea trial phases to assist in the resolution of the DDGM BF upgrade discrepancies as they may occur or are identified during the availability.

2.5. The contractor shall provide technical support for repairs of legacy shipboard systems that interface with the seven (7) core alterations listed in paragraph 1.1. Legacy system repairs will be identified and authorized by NSWCPD personnel, Repairs for legacy shipboard systems will be needed in order to ensure proper integration and operation of newly installed equipment. The contractor shall allot for a minimum of 1500 man-hours in support of this task.

2.6. The contractor shall complete the test procedure steps that are contained in Tables 15-1 and 15-2 in Test Procedure 4B541C000 Rev E (Title: FO Fill/XFER Logic & Alarm Status) Ref 3.49. Tables 15-1 and 15-2 contain the Fuel Control System (SCD 70403) and TDR/TLI (SCD 77829) ground checks and signal verification. The contractor will support troubleshooting efforts for any ground checks and signal verification that fail. The contractor will repair incorrect field wiring in order to retest the failed ground checks and signal verification. The contractor will be responsible for re-testing the failed ground checks and signal verification listed in Table 15-1 and 15-2. The FCS/TLI ISEA will assist (provide term box signal mapping, drawings, etc.) the contractor in resolving any test steps in Table 15-1 and 15-2 that fail initial verification. The contractor shall also provide technical support to the onsite ISEA during all testing phases for systems installed by SCD 73088; SCD 71726, SCD 71604, SCD 77829, SCD 70403, SCD 71615 and SCD 77427 that require testing support due to the criticality of these systems to the core alterations. At a minimum the contractor shall provide four (4) electricians

in support of the Potable Water and Ventilation system and six (6) test support personnel for the MCS system the ISEAs are testing. Test support will include ground isolation, assistance with signal verification, and troubleshooting related to DDGM BF equipment connections. Test support shall also include a complete continuity check from the newly installed equipment to the legacy field device. The contractor shall perform the work identified in the DIU/EC Battery Installation Procedure Ref 3.54 and the UCC Battery Installation Procedure Ref.3.55 prior to the equipment being installed on the ship. The SMR will direct when this work is to be performed. Also, the contractor shall perform the work identified in Ref. 3.52 prior to the equipment being installed on the ship. Discrepancies shall be reported to the waterfront SMR and test coordinator. If discrepancies pertain to work completed as outlined in this work package then the contractor shall resolve the discrepancy. If the discrepancy pertains to a separate activity then the waterfront SMR will assign resolution of that discrepancy to the applicable activity.

2.7. The contractor shall provide technical support to the on-site ISEA in support of the Damage Control individual sensor and string testing. Testing support to cover the testing of each DC sensor, identifying functional discrepancies, troubleshooting and making minor repairs. In addition, the contractor shall identify any bad circuit cards or channels. DC legacy items may also include AFFF, Halon, flood sensors, fire doors, fire main valves, intrusion alarms, and MVHC stations. Expenditures related to this tasking shall be tracked as a separate line item on financial updates. The contractor shall allot for a minimum of 1500 man-hours in support of this task.

2.8. The contractor shall support equipment protection of fragile items such as monitors, cabinet doors, keyboards, SCS ships wheel to prevent installation damage. The contractor shall support disassembly and support protective wrapping of equipment prior to being rigged on the ship by the Prime contractor. Once installed on the ship, the AIT contractor will wrap the new equipment with fire retardant plastic and fire retardant plywood as directed by the OSIC. The contractor shall also procure filter material and incidental material for all newly installed DDGM BF equipment intake louvers to protect from the industrial environment. The contractor shall secure filter material to the intake louvers using temporary adhesive such as duct tape. Once the equipment with installed filter material has been powered up the contractor shall remove the old filter material and replace with new material on a weekly basis. If debris has penetrated the unit the contractor shall provide thorough cleaning of the equipment's internals. If ESD straps are required to clean the equipment internals then the contractor shall procure them as incidental material. Also, the contractor shall accomplish a thorough cleaning of all equipment (internal and external) during and after the industrial period has ended.

2.9. The contractor shall provide a minimum of four (4) connector qualified electricians dedicated to this task to accomplish all C-DR terminal box connections, included in both core alterations and non-core alterations, within C-DR terminal boxes impacting connections. This dedicated team shall also perform a groom of all C-DR terminal boxes included in SCD 73088 GEDMS. Groom tasks may include procurement of missing terminal boards, installation of new terminal boards or hardware, properly

sealing unused penetrations, dressing of existing cables, and shield or ground isolation. Other related tasks shall be completed as required by NSWCPD TPOC and GEDMS ISEA. The contractor shall allot for a minimum of 1500 man-hours in support of C-DR terminal box groom tasks. Contractor shall estimate C-DR box cable terminations using DDG-(b and applicable SIDs (Ref 3.44).

2.10. Provide the services of an experienced shipboard systems Test Coordinator to act as the liaison between the ship and the test team to ensure all testing scheduled to be performed is properly briefed and will have the required shipboard equipment and systems needed available to support each test. This person will be responsible for ensuring the tests to be conducted have the proper personnel (both Government and AIT) scheduled to be on-site to perform each test. The Test Coordinator shall provide programmatic and technical support during the pre-installation planning, installation, integration, testing, and sea trial phases to assist in the resolution of the Core Alt upgrade discrepancies as they may occur or are identified during the availability or as so tasked by NSWCPD Philadelphia.

2.11. Provide the services of experienced shipboard systems Power Coordinator to act as the liaison between the ship, Prime contractor, AITs, SMR, and the test team to ensure all Core Alt equipment to be tested as part of turnovers scheduled in Ref. 3.42, has power available for testing when needed. This person will be responsible for: ensuring all parties are aware of the status of tagouts impacting equipment source power; coordinating with the WAF Coordinator the clearing or moving of required tagouts; working with the Test Coordinator referenced in para 2.10; and briefing all parties concerned on the impact to the test schedule should power not be available to equipment for testing. The Power Coordinator shall provide programmatic and technical support during the installation, integration, and testing phases to assist in the resolution of the Core Alt upgrade discrepancies as they may occur or are identified during the availability or as tasked by NSWCPD Philadelphia.

2.12. The contractor shall accomplish the DDGM BF upgrade of all cables removed and installed, electrical, fiber, coax connectivity, which consists of fiber, coax, signal and power connections in accordance with applicable (b) (2) (DDG(b)) liaison action records (LARs) or reverse liaison action records (RLARs) Ref 3.57 for DDGM BF core alterations as issued by BIW Planning Yard. Due to the amount of design changes and lessons learned during testing for the DDGM BF installed systems, it is anticipated that changes required by LARs and RLARs will need to be accomplished on (b) (2) (DDG-(b). All applicable cable removal, cable installation and connectorization LARs and RLARs shall be accomplished in accordance with NAVSEA Standard Items (Ref 3.41) and all referenced applicable documents. All core alteration LARs and RLARs, to date, will be provided by NSWCPD TPOC. Also, the contractor shall correct all MCS legacy wiring as identified by (Reference 3.53) DDG(b) Legacy Wiring Discrepancies for DDGM BF. The contractor shall allot for a minimum of 1500 man-hours and $5,000 of material in support of LAR and RLAR accomplishment.

2.13. Provide technical and logistics support to the NSWCPD ISEAs and NSWCPD SMRs for the procurement of long lead time material. Long lead time material shall be considered as any item having an estimated delivery date of three (3) weeks after purchase. The contractor shall have all procured, long lead time materials shipped using the fastest shipping method available. Long lead time material purchases shall be approved by both the NSWCPD ISEA and delivery order TPOC. Total man hours shall not exceed 40 hours.

2.14 The contractor shall insure that "DDGM BF MCS equipment, FCS, and Digital Indicators are designed as floating systems. As such, inadvertent grounding of that equipment through cable over shields shorting to the back shell or terminating boxes introduces issues preventing the safe and effective use of that equipment. The installer shall practice proper cable insulation techniques such as those described in Ref 3.50. When following the techniques such as those described in Ref 3.4 the technician shall practice the preferred method where applicable".

3. APPLICABLE DOCUMENTS

3.1. MIL-STD-2042C (SH) Fiber Optic Topology Installation Standard.
3.2. Methods for Naval Ships (Equipment/Connectors and Inter-connectors).
3.3. NAVSEA S9AA0-AB-GOS-010/GS0, General Specifications for Overhaul of Surface Navy Ship.
3.4. DOD-STD-2003 Electric Plant Installation Standard Methods for Surface Ships and Submarines.
3.5. MIL-STD-454, Standard General Requirements for Electronic Equipment.
3.6. MIL-STD-1310G (Navy) Bonding and Grounding.
3.7. OPNAV Instruction 5100.23B, Navy Occupational Safety and Health (NAVOSH) Program Manual.
3.8. Standards and Interpretations, Occupational Safety and Health Chapter 1915.14, 1915.15 and 1915.16.
3.9. NAVSEA SL720-AA-MAN-030 Surface Ship & Carrier Entitled Process for Modernization (NMP-MOM).
3.10. NAVSEA Tech Spec 9090-310G SHIPALT by Alteration Installation Team.
3.11. NAVSSES INSTR 4720.2F Process and Policy for Shipboard Industrial Work.
3.12. MIL-STD-24749, Electrical Grounding, General Specifications.
3.13. MIL-DTL-22520G, General Specification for Crimping Tools and Wire Termination.
3.14. 437-8634366 Rev A, DDG MOD Digital Indicator Electrical Drawing
3.15. 437-8634367 Rev A, DDG MOD Digital Indicator Wire Connections List
3.16. 428-8634377 Rev A, DDG MOD SGL BRDG WATCHSTANDER CNSLD ELEC DWG & ML, DDG-(b ONLY (Copper, Fiber & Coax connections only).
3.17. 428-8634378 Rev A, DDG MOD SGL BRDG WATCHSTANDER LIST OF CONNECTIONS, DDG-(b) ONLY (Copper, Fiber & Coax connections only).
3.18. 431-8634310 Rev A, GEDMS BACKBONE & NODE INTCON CABLE RTG PLAN, DDG-(b ONLY.
3.19. 431-8634309 Rev A, GEDMS AN/USQ-(b) (2) LIST OF CONNECTIONS, DDG-(b ONLY (Copper, Fiber & Coax connections only).

3.20. 431-8634308 Rev A, GEDMS AN/USQ-82(V) CNSLD ELEC DWG & ML, DDG-(b ONLY (Copper, Fiber & Coax connections only).
3.21. 436-8634363 Rev A, SGL CCS WTCHSTNDER FIRE DET SYS ITB CNSLD ELEC MODS & ML, DDG-(b ONLY (Copper, Fiber & Coax connections only).
3.22. 302-8634380 Rev A, SGL CCS WTCHSTNDER INSTALL POTW AUTOMN ELEC MODS & ML, DDG-(b) ONLY (Copper, Fiber & Coax connections only)
3.23. 431-8634382 Rev A, SGL CCS WTCHSTNDER AUTO HEAT STRESS SYS CNSLD ELEC DWG & ML, DDG-(b ONLY (Copper, Fiber & Coax connections only).
3.24. 431-8634383 Rev A, SGL CCS WTCHSTNDER AUTO HEAT STRESS SYS WCL DDG-(b) ONLY (Copper, Fiber & Coax connections only).
3.25. 324-8634407 Rev A, SGL CCS WTCHSTNDER THERMAL MONITORING CNSLD ELEC DWG & ML, DDG-(b ONLY (Copper, Fiber & Coax connections only).
3.26. 300-8634405 Rev A, SGL CCS WTCHSTNDER UCC, RSC & DIU CNSLD ELEC DWG & ML, DDG-(b ONLY (Copper, Fiber & Coax connections only).
3.27. 300-8634406 Rev A, SGL CCS WTCHSTNDER UCC, RSC, DIU WCL, DDG-(b ONLY (Copper, Fiber & Coax connections only).
3.28. 437-8634390 Rev A, INSTL TANK SENSORS (RADAR/TDR) ELEC MODS & ML DDG(b) ONLY.
3.29. 437- 8634391 Rev A, INSTL TANK SENSORS (RADAR/TDR) ELECTRICAL WCL
3.30. 321-8634419 Rev A, HM&E MOD IDD CABLE ROUTING & MN CABLEWAY Check point Location DDG-(b ONLY.
3.31. 321-8634418 Rev A, HM&E MOD IDD CABLE ROUTING &ML.
3.32. 438-8634387 Rev A, FUEL CONTROL SYS CNSLD ELEC DWG & ML DDG(b) ONLY.
3.33. 438-8634388 Rev A, FUEL CONTROL SYSTEM WCL DDG-(b) ONLY.
3.34. 439-8634385 Rev A, DIGITAL VIDEO SURVEILLANCE SYSTEM CNSLD ELEC DWG & ML DDG(b) ONLY.
3.35. MCS Fuse List and quantities Rev B.
3.36. NAVSEA STANDARD ITEM 009-22 (Shipboard Electric Cable Test).
3.37. NAVSEA 0967-LP-000-0110 Electronics Installation and Maintenance Book, Installation Standards.
3.38. Government Furnished Material Listing, to be provided prior to the start of each task.
3.39. S0400-AD-URM-010/TUM, Tag-Out User's Manual ANSI/ASQC Q9002-1994, Quality Systems, Model for Quality Assurance in Production, Installation, and Servicing.
3.40. ANSI/ISO/ASQ Q9001-2000, Quality Management Systems – Requirements.
3.41. NAVSEA Standard Items FY 16
3.42. DDG Mod Critical Path Equipment/Cable MSMO to AIT & Test Requirement Turnover Schedule for DDG(b) ONLY SCDs.
3.43. DDG(b) CABLE INSTALLATION AND CONNECTION RESPONSIBILITY MATRIX (Contractor shall bid all items highlighted in Green and Yellow for accomplishment).
3.44. SIDs referenced in DDG-(b) CABLE INSTALLATION AND CONNECTION RESPONSIBILITY MATRIX
3.45. (b) (2) CONTINUOUS THERMAL MONITORING SWITCHGEAR ICD.
3.46. POTW PUMP CONTROLLER MODIFICATION.

3.47. TEST Procedure: 2A431C001 Rev A, TEST TITLE: DDG Modernization GEDMS CAT5E Bandwidth Test.
3.48. Test Procedure 3B202C020 Cable Ground Test.
3.49. Test Procedure 4B541C000 Rev E FO Fill/Xfer Logic and Alarm Status.
3.50. NSWCPD-SSES Code 426 Cable Prep Guidance.
3.51. NSWCPD-SSES Code 426 DDGM BF ITB Wiring Harness Installation Guidance.
3.52. Shipboard RSC UPS Battery Installation Procedures.
3.53. DDG-(b) Legacy Wiring Discrepancies.
3.54. Test Procedures DIU/ EC Battery Installation Procedure.
3.55. Test Procedure UCC Battery Installation Procedure.
3.56. (b) (2) Standard Methods for Mounting Electrical Equipment under 75 lbs.
3.57. DDG-(b)(2) LAR and RLAR Listings.
3.58. DDG- Asset Recovery List of Equipment

4. REQUIREMENTS

4.1. In support of the DDGM BF Upgrade Installations, prior to start of work, the contractor shall review all referenced installation drawings in order to gain a complete understanding of quantity and type of material, and terminal connections required to complete these installations.

4.2. The contractor shall submit a detailed rip out and installation milestone schedule (POA&M) based on the ship's availability, no later than A-135 from the start of the availability. The contractor will update this POA&M on a weekly basis and more frequently as schedules change, workflow problems occur, or other conditions warrant. The details of this POA&M shall be coordinated with Ship's Force, Prime Contractor/s, Regional Maintenance Centers (RMCs), NSWCPD representatives, and other activities as necessary to ensure that proper support is available and interference or delays are minimized. The updated POA&M shall be submitted to NSWCPD personnel no later than noon the day prior to the RMC weekly progress meeting**. (CDRL A003)**

4.3. Using NAVSEA Standard Item 009-004 and Refs 3.39 & 3.40, the contractor shall develop a QA Workbook to be maintained and updated on-site. This Workbook shall be used to keep an in-process record of Quality Control Inspections and be provided to NSWCPD for review, two weeks after receipt of award. A completed copy of the QA Workbook shall be provided to NSWCPD Personnel within two weeks after completion of availability. **(CDRL A004)** The QA Workbook shall be formatted as follows:

1. Sect. 1 Alteration Description
2. Sect. 2 Personnel Qualifications and Certifications
3. Sect. 3 Procedures Objective Quality Evidence (OQE)
4. Sect. 4 Installation POA&M
5. Sect. 5 Ship Installation Drawing (SID) List
6. Sect. 6 Test and Inspection (T&I) Plan – This plan should identify areas requiring In-Process inspections by annotating steps as Inspection (I), Verification (V), or Government (G) Points. This plan shall also incorporate all testing requirements.
7. Sect. 7 Test & Inspection Records

4.4. The contractor shall initiate a Microsoft Access/Excel DDG-(b) cable tracking database utilizing Reference sections 3.14 thru 3.34 and 3.42 thru 3.49 and 3.52, 3.54, 3.55 and 3.56. This database shall be used to support provisioning of all hook-up sheets, wire markers and tracking of cable/fiber/coax/copper connections and testing progress. Font used for these wire markers shall be large enough to be clearly legible after wire markers have been shrunk. All wire markers shall be typed, no hand written wire markers are acceptable. All wire markers shall be provided on-site prior to start of work. This database shall be capable of compiling connection and test info into a connection/testing report. This report shall include percentage of cables verified, continuity tested, insulation resistance tested, cut into equipment, connection completed, electrician completing hook-up and electrician completing continuity test. During hook-up and testing, the electrician shall update this report to reflect progress of work accomplished on a daily basis. The contractor shall provide on-site support. The on-site support shall include a means to update this database and print out any corrected wire markers as changes become necessary. This database shall be delivered to NSWCPD two weeks after receipt of award and upon end of sea trials the completed version of this database shall be provided to NSWCPD**. (CDRL A016)** The priority for updating the DDG cable tracking database shall be as follows:

4.4.1. Ref. 3.14 thru 3.34, 3.42, 3.43, 3.45, 3.46, 3.47, 3.48, 3.49, 3.54, 3.55 and 3.56.

4.5. Prior to start of the availability, and utilizing installation drawings (Ref 3.14 thru 3.34, 3.42 thru 3.46), GFM list (Ref 3.38), and DDG Mod Critical Path Equipment/Cable & Test Requirement Turnover Schedule (Ref 3.42), the contractor shall develop a material tracking list detailing material required (GFM & IAF) to complete the installation and connectorization/test of DDGM BF core system alterations. The contractor shall maintain and update a database detailing status of material. This status shall include material nomenclature, GFM, HSC, IAF status, part number, quantity, location, tracking number, issued to be installed date and person issued to. This database shall be updated as material status changes and submitted to NSWCPD Personnel. Upon completion of the installation, an electronic copy of this database shall be submitted to NSWCPD. The contractor shall maintain identity of all items of material issued to ship using a DD 1149 Form. Contractor shall provide copies of the DD 1149 Forms to NSWCPD Personnel. **(CDRL A011)**

4.6. The contractor shall at local locations, order, stage, and store all miscellaneous installation material. The contractor shall start his asset recovery utilizing ground straps and anti-static bags and the asset recovery list 3.58 for DDG-(b . Recovery list will be provided by SMR.

4.7. The contractor shall provide the necessary facilities, equipment, tools and trained trade personnel to support cable removals, cable installations, cable hangers, stud runs, cable banding, cableway inspection and MCT closures. The contractor shall provide a full time MCT closure manager who is responsible for tracing all MCT's closures during

the entire availability. Connectorization and testing of all electrical/signal/fiber/coax connections and testing of all the DDG Modernization Backfit (DDGM BF) Upgrade installed systems and interface equipment IAW Standard Item 009-073 Ref 3.41. In accomplishing this work, the contractor shall:

4.7.1. Ensure compliance with all applicable RMC local standard items and regulations.

4.7.2. Conform to shipboard routine with regard to cleanliness, personnel conduct, and the ship's security and integrity IAW Ref .3.41.

4.7.3. Maintain a daily work schedule that is accessible and coordinate all work with Ship's Force, SMR, and NSWCPD Personnel.

4.7.4. Ensure work scheduled and accomplishments meets requirements of POA&M discussed in paragraph 4.2. All discrepancies shall be coordinated and discussed with NSWCPD personnel.

4.7.5. Attend all on-site daily meetings between Prime Contractor, Ship's Force and NSWCPD, upon completion of meeting; provide meeting minutes via email to TPOC. Work Completion Status Reports shall be provided to NSWCPD personnel no later than COB same day to provide NSWCCD time to prepare for next day daily meeting.

4.7.6. Ensure all trade personnel meet applicable NAVSEA technical skill requirements as well as the qualification requirements of the contract.

4.7.7. Provide technical support during the removal, installation, integration, test phases and sea trials to assist in the resolution of DDGM BF upgrade discrepancies as they may occur or are identified during the availability. A core group of six personnel (Sr Engineering Technicians) shall be experienced in DDG(b) Class Gas Turbines, Electric Plant, Machinery Control System, Integrated Bridge and Navigation System, Radar TLI's, Digital Fuel Control and GEDMS operation. The contractor shall also provide for testing and troubleshooting support during the Dock Trials and Sea Trials underway period.

4.7.8. The contractor shall provide the services of one (1) engineer experienced in DDG(b) Class Legacy Electric Plant operation and design for the duration of testing and excluding sea trials. This engineer will support testing of newly installed DDGM BF electric plant equipment and serve as the subject matter expert for all interfaces between new and legacy equipment.

4.7.9. The contractor shall provide the services of one (1) equipment engineer experienced for the duration of testing excluding sea trials. This equipment

engineer will be responsible for the operation of core alteration equipment and managing INCO spares. This equipment engineer will need to arrange adequate lay down area onsite for INCO spares. This engineer will be responsible for documenting equipment condition, deficiencies, and updated inventory status. Defective units shall be shipped using DD 1149. The contractor shall also protect all shipped material, either spares or defects, to the fullest extent possible using protective foam and secure tri-walls. The fastest shipping method available shall be used when shipping all materials, either spares or defects. Tracking information for shipping defective units should be provided to NSWCPD ILS manager within 12 hours of initial shipment **(CDRL A011).**

4.8 The contractor shall provide the services of one (1) engineer experienced in DDG-(b Class Legacy Main Propulsion Plant operation and design for the duration of testing excluding sea trials. This engineer will support testing of newly installed DDGM BF propulsion plant equipment and serve as the subject matter expert for all interfaces between new and legacy equipment.

4.8.1 Provide the services of an experienced AIT test and groom team (20 people) needed to support and conduct ISEA-led test procedures and resolve test discrepancies. The AIT test and groom team shall support test procedures directly related to the seven (7) core alterations: SCD 73088, SCD 71726, SCD 71604, 77427, SCD 77829, SCD 71615 and SCD 70403. The AIT test and groom team shall also provide a minimum of four (4) personnel to support the Potable Water System and Ventilation ISEA. The contractor shall provide the services of an experienced test team to complete Tables 15-1 and 15-2 in FO Fill /Xfer Logic & Alarm Status Test Procedure (4B541C000 Rev E) Ref 3.49. The contractor shall provide a weekly status of the completion of Tables 15-1 and 15-2 to the SMR, Test Coordinator and FCS ISEA. This effort may be in direct support of non-core alterations but is necessary due to the critical impact those alterations have on core alteration testing and milestones.

4.8.2 Provide the services of one (1) Senior Engineering Technician representative, who will provide technical, programmatic and material support to the installation project manager during the entire installation and testing phases.

4.8.3 Dress in and terminate all cabling into all DDGM BF upgrade equipment and any associated auxiliary equipment or connection boxes. This shall include providing and packing all entry devices, collars in all DDGM BF equipment and any associated auxiliary equipment or connection boxes. Dress in and terminate all cabling into C-DR terminal boxes for all DDGM BF SCDs as outlined by Reference 3.50. For non-core alteration cables, only the end terminating within the C-DR terminal box shall be

connected by the contractor. The opposite ends of these particular cables will be connected by either a separate AIT. Dressing shall include providing and packing all entry devices in all DDGM BF equipment and any associated auxiliary equipment or connection boxes. Dressing shall also include isolation of all conductors' including spares and shields using clear heat shrink in order to reduce grounds found during testing. This requirement is needed at both the connection box side and connector to help strengthen the plastic sheathing and prevent each pair or triad shield from coming in contact with ship's ground. The AIT contractor shall remove all dead ended or cut cables in associated connection boxes.

4.8.4 For connection boxes, 1/4" clear heat shrink is required to be installed over the length of each pair or triad of any cable that enters the connection box (commonly called the service loop) prior to crimping lugs at the bitter end. This procedure will reduce the risk of the individual shields for each pair or triad coming in contact with ground utilizing Ref 3.48 for guidance for MCS and FCS only.

4.8.5 For connectors, 1/4" clear heat shrink is required to be installed over each pair or triad prior to building the connector. This procedure will reduce the risk of the plastic sheathing from melting during heat shrinking of the solder ring and shrink boot utilizing Ref 3.48 for guidance for MCS and FCS only.

4.8.6 Perform the following on all new, rerouted, and relocated cables:

4.8.7 Perform a validation check of all electrical, copper, fiber and coax cables to confirm cable origin and destinations prior to start of connectorizaton. This validation check shall consist of performing a continuity test on one conductor for copper cables and continuity test of center conductor for coax cables and light test for all fiber cable. Fiber light test shall be IAW Ref 3.1. Fiber testing shall consist of a visual inspection (6A1) and cable attenuation testing (6B1) and cable assembly link loss test (6C1) with a cable continuity test (6D1) IAW Ref 3.1. Contractor shall also accomplish a complete continuity test for each DDGM BF core alteration cable from the newly installed equipment to the legacy field device. Contractor shall report all discrepancies pertaining to connections completed by other activities directly to the waterfront Ship Manager Representative (SMR) and Test Coordinator. Waterfront SMRs will assign correction of those particular discrepancies to the applicable activity. Contractor shall resolve all discrepancies pertaining to connections they were required to complete as outlined in this work package. Cable tracking database (para 4.4) shall be updated daily to reflect status of all validation checks.

4.8.8 Provide and install all cable identification tags as required on all new and

re-routed cabling installed in effected enclosures and equipment. These cable tags shall be installed at the time cables are pulled/installed into effected spaces, enclosures and equipment.

4.8.9 Contractor shall be responsible for completion of all cable banding and associated cable hanger supports for each new or re-routed cable affected by installation of SCD 71726, SCD 71604, SCD 73088, SCD 77427, SCD 77829, SCD 71615 and 70403 for DDGM BF systems utilizing NAVSEA STANADARD ITEMS Ref 3.41. The contractor shall ensure that there is significant slack (minimum 6") for movement of DDG (b) (2) equipment within the allowable shock excursion zone.

4.8.9 Terminate all signals and command copper wiring on cabling installed in DDGM BF equipment with crimping tools and procedures shall be in accordance with Reference 3.13.

4.8.10 Perform continuity test on all electrical/coax cable conductors in all cables after the installation is completed including the attachment of connectors and/or terminal lugs/ferrules. Continuity tests shall be completed from the newly installed equipment conductors to the legacy field devices if the legacy field device is installed. If the field device is not installed, or cannot be located, the test shall be completed from the newly installed equipment to the furthest point in the system. At a minimum, the newly installed cables must be verified via the continuity test. Contractor shall submit legible copies of a report listing the results of continuity test within 24 hours after completion of test (Reference 3.36). This is to certify that there are no open or shorted conductors inside the cable jacket and that the connectors are correctly terminated and identified. Contractor electrician performing the continuity test shall not be the same individual who made the terminations. Cable tracking database (para 4.4) and QA workbook (para 4.3) shall be updated daily to reflect status of continuity checks.

4.8.11 Perform an insulation resistance test of each electrical/coax cable conductor IAW reference 3.36 and cable tracking database (para 4.4) and QA workbook (para 4.3) shall be updated daily to reflect status of insulation checks**.**

4.8.12 The contractor shall provide calibrated general test equipment to include: Multimeters, meggers, continuity testers, cable tracers, phone test equipment testers, etc.

4.8.13 The contractor shall perform a bandwidth test as outlined by Reference 3.47 for each CAT5E conductor connected to SCD 73088 GEDMS installed equipment. The contractor shall procure the required test equipment and accomplish post termination Bandwidth Testing of the

GEDMS Raychem Special CAT -5 cable IAW Ref 3.47. The Contractor shall submit legible copies of a report listing the results of bandwidth tests prior to the end of the availability. Cable tracking database (Para 4.4) shall be updated daily to reflect status of bandwidth tests.

4..8.14 The contractor shall provide at least 18 communication devices with charging capabilities and additional batteries; these devices will allow the test teams and supporting personnel test operate and maintain all communication devices and their associated pieces of equipment. At this time all devices and components shall be fully functional and operational for future use. The contractor shall be responsible for replacement of any lost communication devices. The contractor shall be responsible for repair of any damaged communication device.

4.9 Weekly financial and technical progress reports shall be provided on all tasks with funding and task completion percentages. All identified disconnects between work completion and money spent shall be addressed. **(CDRL A002)**

4.10 The contractor shall store all reports, database printouts, QA documentation, test procedures and any documentation required by this SOW in a locked filing cabinet stored in a designated space. Storage will be non-permanent and will terminate upon expiration of this delivery order.

4.11 Provide technical and logistics support to the NSWCPD ISEAs for the procurement of incidental materials needed during testing. Incidental materials required for testing may include but are not limited to fuses, circuit breakers, pigtails, and jumper wires.

4.12 The contractor shall procure the material listed in Ref. 3.35 in order to support various system testing.

4.13 The contractor shall provide support services for the accomplishment of a Damage Control System (DCS) groom. The contractor shall investigate all DC alarms and faults within the Damage Control System. Repairs to include replacing blown fuses, correcting wiring issues, cleaning dirty sensors, replacing bad sensors and line resistors. Also the contractor shall identify any bad cards or channels. DC legacy items may also include AFFF, Halon, flood sensors, fire sensors, smoke sensors, fire doors, fire main valves, intrusion alarms, and MVHC stations. These support requirements are vital in order to verify functionality between DDGM BF core alteration HMI and legacy DC systems.

4.14 The contractor shall insure that all Ethernet Bandwidth Test connections shall be made IAW Ref 3.16, 3.17, 3.18, 3.19, 3.20, 3.21, 3.22, 3.23, 3.24, 3.25 3.26, and 3.27.

4.14.1 All Ethernet cables should be connected to the user equipment and User Switch Enclosure (USE) in order to verify correct clocking of the back shell.

4.15 The contractor shall maintain and update a list of all associated equipment 75 lbs.

(Method Mount) or lighter. Also, the contractor shall mount all associated equipment as directed by OSIC or SMR.

4.16 The contractor shall provide a weekly status report for the completion of tables 15.1 and 15.2 of Ref 3.48.

4.17 The AIT contractor shall accomplish the installation of all foundations for electrical equipment/components under 75 lbs. (Method Mount) IAW reference 3.56. This will include power panels, switches, transformers, lighting fixtures, phones, speakers and terminal boxes.

4.18 The AIT contractor shall accomplish Hot Work associated with the electrical modifications to include welding, burning, grinding, drilling and fire watch operations required to install new or modified existing cableways to accommodate new and rerouted cables. This effort will include all required cable support brackets, collars, MCT's and stuffing Tubes.

4.19 The AIT contractor shall turn over 3 sets of red-lined drawings to the OSIC for the seven (7) core system alterations on DDG-(b) at the end of the availability within 14 days of completion. **(CDRL 008).**

4.20 Work Completion Status Reports shall be submitted to NSWCPD personnel each day by COB (Para 4.7.5**).**

4.21 Contractor shall submit reports of all INCO spares and is responsible for documenting all defective equipment conditions and deficiencies. Defective units shall be shipped using DD 1149 (Para 4.7.9**)**

4.22 Contractor shall submit to NSWCPD OSIC legible copies of cable continuity test results within 24 hours after completion of test (ref 3.48) (Para 4.8.7)

4.23 Contractor shall submit to NSWCPD OSIC legible copies of a cable insulation resistance test report within 24 hours after completion of test (Para 4.8.7)

4.24 The contractor shall provide at least 18 communication devices with charging capabilities and additional batteries; these devices will allow the test teams and supporting personnel the ability to communicate throughout the ship (Para 4.8.14).

4.25 Contractor shall submit to NSWCPD OSIC legible copies of bandwidth test results within 24 hours after completion of test (Para 4.14).

4.26 The contractor requires that all associated equipment weighting 75 lbs. or less shall be mounted by the contractor. Also, the contractor shall provide the list of equipment to the on-site SMR and OSIC. (Para 4.15).

4.27 The contractor shall provide weekly status reports for the completion of tables 15.1 and

15.2 of Ref 3.48 as testing starts. (Para. 4.16).

4.28 Copies of the DD Form 1149's shall be provided to NSWCPD Personnel no later than twenty-four (24) hours after issue to the ship or receiving activity. Contractor shall submit tracking information for shipping defective units to the NSWCPD ILS manager within 12 hours of initial shipment.

5. DELIVERABLES

5.1 Detailed Installation Milestone Schedule (POA&M) shall be submitted no later than A-135 from start of installation. The POA&M shall be revised on-site weekly and a copy provided to NSWCPD SSES personnel. Updates shall be submitted daily to NSWCPD personnel tracking progress. (Para 4.2, **CDRL A003)**

5.2 A Quality Assurance (QA) Work Book shall be assembled by the contractor as per NAVSEA Standard Item 009-004 and refs 3.39 and 3.40, and maintained on-site. This QA book shall be delivered to NSWCPD with thirty (30) working days prior to start of availability for review and two (2) weeks after completion of availability (Para 4.3, **CDRL A004).**

5.3 An electronic copy of the cable-tracking database shall be submitted seven (7) working days prior to start of availability and seven (7) working days after completion of the availability (Para 4.4,**CDRL A016).**

5.4 A Material Tracking Database shall be provided at least weekly or as material status changes (Para 4.5**, CDRL A011).**

5.5 Weekly financial and technical progress reports shall be provided on all tasks with funding and task completion percentages. All identified disconnects between work completion and money spent shall be addressed. (Para 4.9**, CDRL A002).**

5.6 The contractor shall provide 3 sets of red – lined drawings to the OSIC within 14 days of completion of the availability. (Para 4.19 **CDRL A008)**

6. SCHEDULE

6.1 The installation preparation will commence immediately upon delivery order award. Installation schedule will be determined by the schedule of the USS MCFAUL (DDG-(b) and Reference 3.41.

7. GOVERNMENT FURNISHED INFORMATION/MATERIAL

7.1 NSWCPD will provide all available DDG-(b drawings and associated documentation.

7.2 NSWCPD will provide Shipboard Integrated test plan which will be used to test functionality of all relocated/systems/equipment.

7.3 NSWCPD will provide all GFM listed in Reference 3.38.

8. CONTRACTOR FURNISHED MATERIAL

8.1 The contractor shall provide all miscellaneous and incidental installation material required for cable entry and connection of DDGM BF equipment and connection boxes.

9. TRAVEL (REQUEST EACH LOCATION BE ESTIMATED SEPARATELY)

9.1 Norfolk, VA –Phila.PA. and return

People	25
Days	120
Trip(s)	1

9.2 Norfolk, VA.-Phila.PA and return

People	2
Days	3
Trips	3

10. CLASSIFIED MATERIAL

10.1None

11. PERIOD OF PERFORMANCE

11. 1 16 Months

12. PLACES OF PERFORMANCE

12.1 It is anticipated that the place of performance will be Norfolk, VA.

13. OVERTIME

13.1 Overtime is requested for the installation team in order to complete the installation within the periods of ship availability.

14. CONTRACTOR PERSONNEL IDENTIFICATION

14.1 In the performance of this contract, contractor employees shall identify themselves as contractor personnel by introducing themselves or being introduced as contractor personnel and by displaying distinguishing badges or other visible identification for meetings with Government personnel. Contractor personnel shall appropriately identify themselves as contractor employees in telephone conversations and formal and informal written correspondence.

15. CONTRACTING OFFICER REPRESENTATIVE (COR)

15.1 The COR for this delivery order is (b) (6) NSWCPD Code (b) Philadelphia, PA (b) (6)

16. SUBJECT MATTER EXPERT (SME)

16.1 The SME for this Delivery Order is Mr. (b) (6) NSWCPD, Code (b) (6) or Mr. (b) (6) NSWCPD Code (b) (6)

Section E - Inspection and Acceptance

INSPECTION AND ACCEPTANCE TERMS

Supplies/services will be inspected/accepted at:

CLIN	INSPECT AT	INSPECT BY	ACCEPT AT	ACCEPT BY
0002	Destination	Government	Destination	Government
0002AA	Destination	Government	Destination	Government
0002AB	Destination	Government	Destination	Government
0004	Destination	Government	Destination	Government
0004AA	Destination	Government	Destination	Government

Section F - Deliveries or Performance

DELIVERY INFORMATION

CLIN	DELIVERY DATE	QUANTITY	SHIP TO ADDRESS	DODAAC
0002	N/A	N/A	N/A	N/A
0002AA	05-MAY-2017		NAVAL SURFACE WARFARE CENTER PHILA (b) (6) NSWC PHILADELPHIA DIVISION NSLC DETACHMENT 1601 LANGLEY AVE, (b) (6) PHILADELPHIA PA 19112-5051 (b) (6) FOB: Destination	N64498
0002AB	05-MAY-2017		(SAME AS PREVIOUS LOCATION) FOB: Destination	N64498
0004	N/A	N/A	N/A	N/A
0004AA	05-MAY-2017		NAVAL SURFACE WARFARE CENTER PHILA (b) (6) NSWC PHILADELPHIA DIVISION NSLC DETACHMENT 1601 LANGLEY AVE, (b) (6) PHILADELPHIA PA 19112-5051 (b) (6) FOB: Destination	N64498

Section G - Contract Administration Data

ACCOUNTING AND APPROPRIATION DATA

AA: 1761810 81DM 251 VU021 0 050120 2D 000000
COST CODE: A10003405176
AMOUNT: (b) (4)
CIN 130056665600003: (b) (4)
CIN 130056665600004:

FUNDING INFO

This order is incrementally funded and the amount currently available for payment hereunder is limited to (b) (4) , inclusive of all costs, fee and any other charges. It is estimated that the funding under this order will cover the cost of performance through 5 April 2017. In accordance with contract clause 52.232-22, Limitation of Funds, the Government is not obligated to reimburse the contractor for any costs incurred in excess of (b) (4) unless additional funds are made available and obligated under this order in a subsequent modification. The total unfunded balance remaining is (b) (4) based on the total delivery order value.

Section J - List of Documents, Exhibits and Other Attachments

ATTACHMENTS

1. Contract Data Requirements List
    a. A002 DD FORM 1149
    b. A003 POA&M
    c. A004 QUALITY ASSURANCE WORK BOOK
    d. A008 RED- LINES SHIP INSTALLATION DRAWINGS
    e. A011 MATERIAL TRACKING DATABASE
    f. A016 CABLE TRACKING DATABASE